

TRANSLATION

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JAPANESE PATENT SPECIFICATION

No. 57-47680 (1982)

PROCESS FOR PRODUCTION OF SOLID SWEETENER COMPOSITIONS

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Inventor(s): S. Uematsu et al.

Assignee: Meiji Seika K.K.

PATENT CLAIM

A process for production of solid sweetener compositions, comprising the steps of concentrating, under atmospheric or subatmospheric pressure, a maltitol syrup or a reduced high-maltose starch conversion syrup, recovering a concentrate of not more than 3% water content, cooling and grinding said concentrate, uniformly admixing to the pulverulent concentrate one or more members of the group consisting of pulverulent sugars, sugar alcohols and natural or artificial sweeteners, introducing the powder mixture into a tableting or the like forming mold, or spreading a layer of said powder constituents and heating said layer at a temperature of at least 45° so as to sinter

(coalesce) the particles, releasing the tablets or the like from the mold or cutting up the sintered powder product, and cooling.

EXAMPLE 1

A reduced high-maltose syrup (25% water, solids composition: 75% maltitol, 4% sorbitol, 21% other) was boiled down in a pan under atmospheric pressure for about 50 minutes. When the pan contents reached a temperature of 190°, they were spread on a water-cooled tray as used for caramel cooling and rapidly cooled to ambient temperature. The high-maltitol composition, containing about 1.4% water, was transferred into a hammer mill type crusher and pulverized.

The pulverulent product (800 g) was blended with 140 g of fructose powder and 60 g of a starch hydrolyzate made by Mimatsu Kogyo K.K. under the trade designation SLD 35. The powder composition was spread on a tray and heated for 2 minutes at 80°. The plastic sheet formed was passed through the nip of a pair of roll cutters and discharged as pellets. These were chilled and collected as solid sweetener.

EXAMPLE 2

The high-maltitol syrup of Example 1 was concentrated, cooled and crushed as in Example 1 and 650 g blended with

350 g of crushed, crystalline glucose monohydrate and the mixture spread to a thickness of about 5 mm on a tray and this placed for 3 minutes in an oven heated at 75°. The layer was then in a semi-molten state. The soft sheet was then pelleted in two passes through a pair of pelleting molds.

EXAMPLE 3

The high-maltose syrup of Example 1 was reduced. The solids composition of the resulting syrup was 87% maltitol, 2% sorbitol and 11% other. The syrup was concentrated, cooled and crushed as in Example 1, and 750 g blended with 20 g saccharin and 230 g cane sugar. The powder mixture was spread continuously on a belt passing through a tunnel heated by infrared lamps. When the sheet was at a temperature of 100° it was immediately put through a two-way cutter and cut into 5 mm cubes and these were cooled.

EXAMPLE 4

The high-maltose syrup of Example 1 was reduced, concentrated, cooled and crushed as in Example 1, and blended with fructose and a starch hydrolyzate. The pulverulent mixture was packed into cube molds and molded under light pressure. After heating in the mold for 10 minutes at 70°, the sintered cubes were expelled and cooled.